UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,507	12/29/2000	Byoung Heon Lee	P-176	6878

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EXAMINER
CHOU, ALBERT T

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

   4a) Of the above claim(s) *3-5 and 8* is/are withdrawn from consideration.

5)☒ Claim(s) *1,2,6,7 and 9-18* is/are allowed.

6)☒ Claim(s) *19-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The following is a response to the amendment filed on February 17, 2005.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 19-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Havinis et al. (US Patent No. 6,259,454), hereinafter referred to as Havinis, in view of

Alewine et al. (US Patent No. 6,150,961), hereinafter referred to as Alewine.

Regarding claims 19 and 34, Havinis discloses a mobile station calculates its

own location in a cellular network and reports that calculated location back to the

requester, base station and switching center. The mobile station can be a car phone, or

other portable phone, used by the mobile subscribers to communicate with cellular

network, each other, and user outside the subscribed network **[Col. 1, lines 38-41]**.

Havinis does not teach a method for determining vehicle traffic. Alewine teaches a

method and a system for determining vehicle traffic, comprising:

receiving location information from a mobile terminal **[Fig. 2; col. 3, lines 58-59;**

a mobile unit 101 in communication with the central monitoring station];

detecting whether the mobile terminal is in a moving vehicle **[Fig. 2; col. 3, lines**

62-66; Data from the GPS device 203 is passed to CPU 204 which computes a

current location of the vehicle from the GPS data and transmits to data

aggregator 222; monitoring the vehicle's position as a function of time reveals the

velocity of the vehicle]; and

if the mobile terminal is in a moving vehicle, determining traffic conditions along a

route based on the location information **[Fig. 2; col. 4, lines 12-16; The data**

aggregator functions 222 infers from the aggregate data input from the set of

vehicles traffic congestion in the area and by accessing the map database 223

can generate alternative routes for the individual vehicle].

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to combine the position and speed information (vehicle's position as a

function of time) of Alewine with the chronicled location information of Havinis. The

motivation would have been to provide a warning of delays or updates on traffic

conditions on the road ahead to the mobile subscribers.

Regarding claims 20, 21, 39 and 40, Havinis teaches transmitting location

information of one terminal to another terminal. Havinis does not teach transmitting

information indicative of the traffic conditions to another mobile terminal in response to a

request signal from the other mobile terminal. Alewine teaches the method and the

system of transmitting information indicative of the traffic conditions to another mobile

terminal in response to a request signal from the other mobile terminal **[Fig. 2; col. 4,**

lines 12-16; The data aggregator functions 222 infers from the aggregate data

input from the set of vehicles traffic congestion in the area and by accessing the

map database 223 can generate alternative routes for the individual vehicle. Fig.

3; col. 4, lines 39-41; The central monitoring station 120 broadcasts the updated

traffic map to the mobile unit via cellular infrastructure 215; Fig. 3; steps; Receive

POS/VEL INFO, REQUEST TRAFFIC MAP DATA, AGGREGATE MU INFO, UPDATE

& SEND TRAFFIC MAP TO MOBILE UNIT]. It would have been obvious to a person of

ordinary skill in the art at the time of the invention to combine the vehicle traffic

conditions, including maps of congestion and alternative routes, of Alewine with the

chronicled location information of Havinis. The motivation would have been to provide a

warning of delays or updates on traffic conditions on the road ahead to the mobile

subscribers.

Regarding claims 22 and 41, Havinis teaches the local information includes:

locations of the mobile terminal along the route **[Fig. 4; col. 5, lines 65-66]**; and

times when the locations were detected **[Fig. 4; col. 5, line 67, col. 6, line 1-3;**

store the calculated location with a timestamp in the memory].

Regarding claims 23, 24, 25, 42, 43 and 44, Havinis teaches the location is

included within a respective one of a plurality of services areas of a mobile

communication system **[Fig. 3; Cell 22]** and only one location for each of the service

areas is received in a single transmission **[Fig. 3; Cell 22, Position Information 205**

and Serving BTS 24].

Regarding claims 26, 27, and 45, Havinis teaches the single transmission is

received after detection of a predetermined number of locations of the mobile terminal

and the predetermined number is indicated by a parameter transmitted to the mobile

terminal **[Figs 3 & 4; col. 5, lines 10-16; When the LA 280 sends the positioning**

request 285 to MS 20 via BSC and serving BTS, the position request includes a

positioning indicator 287 and a reporting indicator 288. The position indicator

indicates how often the MS 20 should position itself and the reporting indicator

indicates how often the MS 20 should report the location information].

Regarding claims 28 and 37, Havinis teaches the position request includes a

positioning indicator 287 and a reporting indicator 288. The position indicator indicates

how often the MS 20 should position itself and the reporting indicator indicates how

often the MS 20 should report the location information **[Havinis: Figs 3 & 4; col. 5,**

lines 10-16]. Havinis does not expressly teach both position indicator and the reporting

indicator vary based on at least one of road conditions and traffic congestion along the

road. Alewine teaches computing a current location of the vehicle from the GPS data

and monitoring the vehicle's position as a function of time reveals the velocity of the

vehicle **[Alewine: Fig. 2; col. 3, lines 62-66]**. It would have been obvious to a person

of ordinary skill in the art at the time of the invention to combine the variables of position

indicator and the reporting indicator in Havinis with the vehicle traffic conditions,

including maps of congestion and alternative routes, in Alewine. The motivation would

have been to provide a warning of delays or updates on traffic conditions on the road

ahead to the mobile subscribers based on the realistic number of times of transmitting

report and thus reducing the traffic load of the network.

Regarding claims 29 and 30, Havinis teaches the position request includes a

positioning indicator 287 and a reporting indicator 288. The position indicator indicates

how often the MS 20 should position itself and the reporting indicator indicates how

often the MS 20 should report the location information **[Havinis: Figs 3 & 4; col. 5,**

lines 10-16]. Havinis does not expressly teach determining the vehicle traffic. Alewine

teaches the determination of vehicle traffic and the detection of whether the mobile

terminal is in a moving vehicle includes:

comparing the times to a predetermined interval value **[Fig.2; col. 1, lines 59-63;**

the collective input of a set of mobile units is processed and a statistical

sampling of mobile units may give an accurate estimate of traffic patterns]; and

determining whether the mobile terminal is in a moving vehicle or carried by a

walking user based on the result of the comparison **[Fig. 2; col. 3, lines 65-67, col. 4,**

lines 1-4; monitoring the vehicle's position as a function of time reveals the

velocity of the vehicle or mobile unit is carried by a walking user].

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to combine the position indicator and the reporting indicator in Havinis with

the vehicle traffic conditions, including maps of congestion and alternative routes, in

Alewine. The motivation would have been to provide a warning of delays or updates on

traffic on the road ahead to the vehicle subscribers based on the optimal number of

times of transmitting report and thus reducing the traffic load of the network.

Regarding claim 31, Havinis teaches the mobile terminal performs mobile

communication service functions and traffic information service functions **[Col. 3,**

lines13-15; a Mobile Station 20 calculates its own position within a cellular

network to report that calculated location to the requester].

Regarding claim 32, Havinis teaches the mobile terminal is PCS terminal [Fig. 1;

col. 1, lines 38-40; MS 20 is a car phone or other portable phone used by the

mobile subscribers to communicate with the cellular network and each other].

Regarding claim 33, Havinis teaches the location information is received from the

mobile terminal through base transceiver station located at predetermined position

along the route [Figs. 1 & 3, MS 20, Position Information 205, Serving BTS 24; col.

4, lines 9-15].

Regarding claim 35, Havinis teaches the network block includes a plurality of

base transceiver stations, each in a respective one of a plurality of service area of a

mobile communication system for receiving location data from the mobile terminal

information is received from the mobile terminal [Figs. 1 & 3, MS 20, Position

Information 205, Serving BTS 24; col. 4, lines 9-15].

Regarding claim 36, Havinis teaches the first base transceiver station transmits a

parameter to the mobile terminal indicating a number of times location detection is to be

performed [Figs 3 & 4; col. 5, lines 10-16; When the LA 280 sends the positioning

request 285 to MS 20 via MSC and serving BTS, the position request includes a

positioning indicator 287 and a reporting indicator 288. The position indicator

indicates how often the MS 20 should position itself.]; and a second base

transceiver station receives the location information from the mobile terminal after

location detection has been perform said number times [Figs 3 & 4; col. 5, lines 10-16;

When the LA 280 sends the positioning request 285 to MS 20 via MSC and serving BTS, the position request includes a positioning indicator 287 and a reporting indicator 288. The reporting indicator indicates how often the MS 20 should report the location information.].

Regarding claim 38, Havinis teaches the location information includes only one location of the mobile terminal in each of the service area **[Figs 3 & 4; col. 5, lines 10-16; When the LA 280 sends the positioning request 285 to MS 20 via MSC and serving BTS, the position request includes a positioning indicator 287 and a reporting indicator 288. The position indicator indicates how often the MS 20 should position itself]**.

Regarding claim 47, Havinis and Alewine teach the PCS system includes mobile units, cellular infrastructure including a plurality of BTS, BSC and MSC, and central monitoring station/mobile location center in the switching center **[Havinis: Figs 1-4; Alewine Fig. 2]**.

Allowable Subject Matter

4.   Claims 1, 2, 6, 7, 9-18 are allowed.

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Albert T. Chou whose telephone number is 571-272-

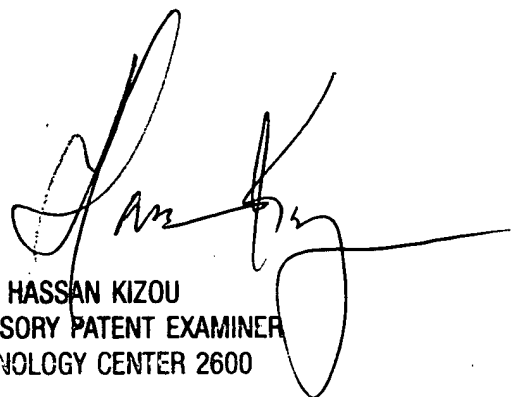6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Albert T. Chou
May 4, 2005

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600